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(21) International Application Number: PCT/US93/08537 (22) International Filing Date: 9 September 1993 (09.09.93)  (30) Priority data: 07/962,636                      16 October 1992 (16.10.92)      US  (71) Applicant: BELOIT TECHNOLOGIES, INC. [US/US]; 300 Delaware Avenue, Suite 512, Wilmington, DE 19801-1622 (US).  (72) Inventors: BONANDER, James ; 1107 Fairview Road, #8, Clarks Summit, PA 18411 (US). SLAGOWSKI, Eugene, L. ; 903 Longview Terrace, Waverly, PA 18471 (US).  (74) Agent: ARCHER, David, J.; One St. Lawrence Avenue, Beloit, WI 53511 (US).		(81) Designated States: CA, JP, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  Published <i>With international search report.</i>
(54) Title: A METHOD OF MANUFACTURING A COVER FOR A PRESS ROLL  <div data-bbox="602 1129 1344 1669" data-label="Image"> </div> (57) Abstract  A method of manufacturing a cover for a press roll includes the steps of feeding epoxy matrix (10) into a container (12) and agitating the same. Filler material (16) is added to the matrix (10) while the matrix is being agitated. The matrix (10) and filler (16) are conveyed to an application zone (18). A roll (20) of reinforcing material (22) is unwound such that the unwound reinforcing material (22) extends past the application zone (18). The agitated matrix (10) and filler (16) is applied to the unwound material (22) during passage of the material past the application zone (18). The reinforcing material (22) with the matrix (10) and filler (16) applied thereto are then spirally wound around the press roll (28) such that the press roll (28) is covered with the reinforcing material (22) impregnated with the matrix (10) and filler (16). The arrangement is such that the surface characteristics of the resultant cover are dependent on the amount and type of filler material added to the matrix (10).		

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## PATENT APPLICATION

TITLE: A METHOD OF MANUFACTURING A COVER FOR A PRESS ROLLBackground of the InventionField of the Invention

The present invention relates to a method of manufacturing a cover for a press roll. More specifically, the present invention relates to a method of manufacturing a cover for a press roll which includes spirally winding reinforcing material around the press roll.

Information Disclosure Statement

In the papermaking art, a formed web is guided through a press section for removing water from the web.

Steel press rolls have been covered with rubber or synthetic material in order to enhance the water removing capability of the press.

Often, it has been the practice to add filler particles to the rubber compounds prior to application of the rubber compound to the steel roll shell in order to change the hardness of the resultant cover.

Additionally, fillers have been added to urethane in order to increase the hardness of the cover.

However, more recently, it has been found advantageous to impregnate reinforcing material with a urethane material and to spirally wind the same onto a roll shell. However, such spiral winding of the

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reinforcing material does not readily permit the addition thereto of the aforementioned filler particles.

The present invention overcomes the problem of adding filler to the spirally wound reinforcing material by applying the filler to an epoxy matrix prior to the application of the mixture to the reinforcing material.

Therefore, the present invention provides a method of manufacturing a cover for a press roll that overcomes the aforementioned inadequacies of the prior art arrangements and which makes a considerable contribution to the art of manufacturing a cover for a press roll.

Other objects and advantages of the present invention will be readily apparent to those skilled in the art by a consideration of the detailed description contained hereinafter, taken in conjunction with the annexed drawings.

#### **Summary of the Invention**

The present invention relates to a method of manufacturing a cover for a press roll. The method includes the steps of feeding an epoxy matrix into a container and agitating the matrix. Filler material is added to the matrix while the matrix is being agitated, and the matrix and filler are then conveyed to an application zone. Reinforcing material is unwound from a roll such that the material extends past the application zone. The agitated matrix and filler are applied to the unwound material during passage of the material past the application zone. The reinforcing material, together with the matrix and filler, are then spirally wound around the press roll such that the press roll is covered with the reinforcing material impregnated with the matrix and filler. The arrangement is such that the surface characteristics